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The Susquehanna River Basin Commission was created as an independent agency by a federal-interstate compact* among the states of Maryland, New York, Commonwealth of Pennsylvania and the federal government. In creating the Commission, the Congress and state legislatures formally recognized the water resources of the Susquehanna River Basin as a regional asset vested with local, state and national interests for which all the parties share responsibility. As the single federal-interstate water resources agency with basinwide authority, the Commission's goal is to effect coordinated planning, conservation, management, utilization, development and control of basin water resources among the government and private sectors.

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A bibliography of selected
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PREFACE

The purpose of this compilation is to present a categorized bibliographic listing of selected papers and text books on nonpoint source pollution. The citations were selected from literature containing substantive information directly or indirectly related to nonpoint sources of pollution. Most of the citations were extracted from literature published between 1967 and May 1992. Most of the literature citations were obtained from two sources: published literature; and nonpoint source literature reviews, published in the June issues of the Journal of the Water Pollution Control Federation, for the years 1987 to 1991. The published literature included: proceedings of nonpoint source related symposia; text-publishers' listings; Water Resources Research; Water Resources Bulletin; Journal of Hydrology; Journal of Hydraulic Engineering; Journal of Environmental Quality; Water and Sewage Works; Journal of Irrigation and Drainage Engineering; Journal of Soil and Water Conservation; Soil Science Society of America Journal; and Water, Air, and Soil Pollution. Selections were made from the more than 800 references included in the literature reviews published by the Journal of the Water Pollution Control Federation. These references were derived from the world's nonpoint source literature for 1986 to 1990. Approximately 15 percent of the literature citations were obtained through a keyword search of the USGSLIB bibliographic data base, which includes references from Selected Water Resources Abstracts (SWRA), GEOREF, and more than 200 other bibliographic files.

This bibliography was prepared as part of an investigation of technical procedures for managing nonpoint source pollution in Pennsylvania. The study was conducted in cooperation with the Pennsylvania Department of Environmental Resources (Pa. DER). Funds were provided by Pa. DER and the U.S. Environmental Protection Agency, under Section 205(j)(5) of the Clean Water Act of 1987, and by SRBC.

CONTENTS

Page

Keywords and Explanation of Categories Used in the Bibliography 1

General Water Quality and Nonpoint Source Problems, Problem Identification and Management Issues 5

General Aspects of Modeling Water Quality, Reviews of Areal Scale Models, and Modeling Problems 25

Detailed Discussions of Areal Scale Models for Estimating Pollution and Pollution Potential 33

Model Input Data Acquisition 47

Water Quality Monitoring 53

Micro Scale, Macro Scale, and Detailed Process Models and Studies 59

Unclassified 81

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KEYWORDS AND EXPLANATION OF CATEGORIES USED IN THE BIBLIOGRAPHY

The following is a list of keywords used to search the USGSLIB data base.

Keywords

- Agricultural pollution
- Baseflow
- Bibliography and animal waste
- Bibliography and nutrients
- BMP and BMPs
- Chemistry of surface water
- Netherlands
- Nitrate (nitrates)
- Non-point or nonpoint
- NPS nutrients (nonpoint source nutrients)
- Nutrients
- Nutrient and transport
- Nutrient transport
- Nutrients and cause
- Pasture
- Phosphorous
- Region, nutrients (linked)
- Stormflow
- Surface water

The following are descriptions of the bibliographic and reference material availability categories.

General Water Quality and Nonpoint Source Problems, Problem Identification and Management Issues

This category includes papers which have a primary focus on the general aspects of nonpoint source problems such as the following:

a. General discussion of methods for identifying pollution sources;

b. Issues pertaining to management of water quality, and point and nonpoint sources, including policy issues and strategies for management;

c. Selection and evaluation of effects of BMPs;

d. Econometric and optimization models, which address policy issues;

e. Effects of and damages caused by nonpoint sources;

f. Targeting remediation measures;

g. Specific basinwide studies; and

h. Decision support systems.

General Aspects of Modeling Water Quality, Reviews of Areal Scale Models, and Modeling Problems

This category includes papers and reports which have a primary focus on general aspects of empirical and simulation models of water quality, at a field scale or watershed scale, from a technical viewpoint. Papers include general aspects of modeling water quality processes on the land surface, in the groundwater and in streams and lakes. Papers and reports have a primary focus on the following aspects of modeling:

a. General problems which may be encountered in modeling water quality, including problems encountered with particular models.

b. Reviews of water quality models;

c. General aspects of model calibration;

d. General aspects of model data requirements;

e. General aspects of model parameter identification;

f. Model parameter sensitivity studies;

g. Model selection guidelines; and

h. User interface.

Detailed Discussions of Areal Scale Models for Estimating Pollution and Pollution Potential

This category includes reports and papers which have a primary focus on detailed discussions of specific empirical and simulation models of water quality at field scale or watershed scale, and specific aspects of applications of such models. Papers which describe models of processes on the land surface, groundwater, and lakes and streams are included. Papers may include model descriptions, model applications, field testing and validation of models, and examples of model applications. Some papers may appear in both this category and "Micro Scale, Macro Scale, and Detailed Process Models and Studies," due to overlap.

Model Input Data Acquisition

This category includes reports and papers which focus primarily on the acquisition of data necessary for input to models, including field data acquisition and analysis. Papers are included which have a primary focus on:

a. Existing model input parameter data bases;

b. Development and use of geographic information systems for development of input data;

c. Linking geographic information systems with models;

d. Data management;

e. Model input parameter estimation; and

f. Monitoring to evaluate input parameters.

Water Quality Monitoring

This category includes reports and papers which focus primarily on: procedures for collecting chemical quality and biological data in runoff, streams, lakes and groundwater, and use of that data for water quality management; descriptions of existing water quality data and analyses of that data; and discussions of water quality data analysis procedures, and procedures for design of monitoring systems.

Micro Scale, Macro Scale, and Detailed Process Models and Studies

This category includes papers which have a primary focus on the following:

a. Micro- and macro- scale process studies and models of such processes; and

b. Models of limited aspects of the hydrologic cycle.

These processes and models may include: rainfall process models; effects of storm pattern; evaporation and infiltration processes; fate and transport processes; sediment models; nitrogen dynamics models; sediment processes on land, or in streams or lakes; and factors affecting those processes. This category overlaps with "Detailed Discussions of Areal Scale Models for Estimating Pollution and Pollution Potential.

Unclassified

This category includes proceedings.

Reference material availability

1 - Complete reference on hand

2 - Abstract only on hand

3 - Complete reference locally available

4 - Reference probably not readily available

GENERAL WATER QUALITY AND NONPOINT SOURCE PROBLEMS

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GENERAL ASPECTS OF MODELING WATER QUALITY

REVIEWS OF AREAL SCALE MODELS AND MODELING PROBLEMS

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